

REMARKS

Responsive to the Office action mailed November 18, 2009, applicant request entry of the foregoing amendments, consideration of the following remarks and reconsideration of the rejections set forth in said office action. A Petition for a three month extension of time to May 18, 2010 and requisite fee are filed herewith. A Request for Continued Examination and the requisite fee is filed herewith.

Claims 1-11 were rejected under 35 USC 103(a) as being unpatentable over Ecsedy, US Patent 3,996,062 (hereinafter Ecsedy '062). Applicants submit that Ecsedy '062 fails to render obvious the present invention.

Ecsedy '062 discloses a process for preparing chlorobutyl rubber compositions using para-tert butyl phenol disulfide curing agent containing more than 27% sulfur. Applicant submits that Ecsedy '062 fails to disclose or render obvious the use of poly(alkylphenol) polysulfides in combination with urea in the vulcanization of EPDM type rubbers as claimed in the present invention. It was discovered that the combination of the present invention provided for a vulcanization process in which the production of undesirable nitrosamines was minimized and the "speed" of the process was acceptable.

Applicants submit that the disclosure of vulcanization process for chlorobutyl rubber with no mention of the accelerating effect of urea on poly(alkylphenol) polysulfide vulcanization agents and no mention of EPDM rubbers fails to render obvious the present invention. The examples in the present application evidence the unexpected "speed" of a combination of the present invention. Applicant submits that Ecsedy '062 fails to render obvious a vulcanization agent comprising a combination of a poly(alkylphenol) polysulfides and urea in the vulcanization of EPDM type rubbers as claimed in the present invention.

The examiner has argued that one of ordinary skill in the art at the time of the invention would have realized that oxygen is a well known substitute for sulfur and therefore the sulfur in the thiourea could be replaced with oxygen to form a urea. Applicant submits that there is nothing in Ecsedy '062 that would make it obvious, in a sulfur based vulcanization process to replace the sulfur in the thiourea materials

disclosed in Ecsedy '062 as accelerators/co-vulcanizing agents with oxygen. Ecsedy '062 discloses only the use of sulfur containing materials as accelerators/co-vulcanizing agents and applicant submits that it would not be obvious to replace such sulfur containing materials with non-sulfur containing material. Applicant submits that were a person skilled in the art to consider replacing the sulfur containing accelerators/co-vulcanizing agents disclosed by Ecsedy '062, the person would look to other sulfur containing materials since that is all that Ecsedy '062 discloses.

Claims 1-11 were rejected under 35 USC 103(a) as being unpatentable over Ecsedy '062 in view of Rowland et al, US Patent 5,326,828 (herein after Rowland et al. '828. Applicant submits the neither Ecsedy '062 nor Rowland et al. '828, alone or in combination, render obvious the present invention.

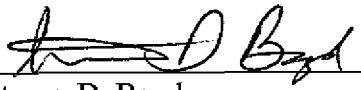
Rowland et al. '828 discloses the use of tetrabenzyl-thiuram disulfide and urea and sulfur in the vulcanization of thermosetting elastomer compositions. Each of the three components of the system disclosed by Rowland is identified as "critical". See column 4, lines 18, 22 and 29. Applicant submits that there is no disclosure of the use of poly(alkylphenol) polysulfide vulcanization agents in Rowland et al. '828.

Rowland et al. '828 discloses a system which exhibits the advantages of using thiuram disulfides accelerators while eliminating the generation of certain undesirable nitrosamines (see column 2, lines 26-28). The system disclosed uses TBTDS (tetrabenzyl thiuram disulfide) in combination with urea and sulfur (see column 2, lines 28-31). Rowland et al. '828 discloses that each component of this unique package of TBTDS/Urea/Sulfur is critical. Applicant submits that were it obvious to combine the teaching of Ecsedy '062 and Rowland et al. '828, which applicant submits is not the case, the combination system would be by the use of para-tert-butylphenol polysulfides together with an accelerator, which is said to possibly be a tetramethyl thiuram monosulfide by Ecsedy '062, and to replace this TMTDS (according to Rowland et al. '828) with the unique package (TBTDS/urea/sulfur). Rowland et al. '828 fails to teach the use of urea alone but teaches that it is more efficient when combined with TBTDS than with TMTDS. Applicant submits that it is not obvious to combine the teachings in Ecsedy '062 with those of Rowland et al. '828 to replace thiourea with the.

In view of the foregoing remarks, applicant respectfully submits that claims 1, and 4-11 of the present application are in condition for allowance and prompt favorable action is solicited.

Respectfully submitted,

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